

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۲ کلاس:
 ۱۹, ۵ آفرین! مرتب بنویس!

$$y = \frac{u^2 + 4u + 4}{u-1} \Rightarrow y(u-1) = u^2 + 4u + 4 \Rightarrow u^2 + 4u - yu + 4 + y = 0 \quad \Delta \geq 0$$

$$b^2 - 4ac \geq 0 \Rightarrow (1-y)^2 - 4 \times 1 \times (4+y) \geq 0 \Rightarrow 1 + y^2 - 2y - 1 - 4y \Rightarrow y^2 - 4y - 4 = 0$$

$$\frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow \frac{-(1-y) \pm \sqrt{y^2 - 4y - 4}}{2}$$

$$\left(\frac{y-1}{2}, \frac{y-1}{2} + \sqrt{y^2 - 4y - 4} \right)$$

$$\rightarrow \frac{1}{2} \left(\frac{y-1}{2} - \sqrt{y^2 - 4y - 4} \right) \rightarrow \frac{-b}{2a} \Rightarrow \frac{y-1}{2} \Rightarrow \frac{y-1}{2} + 1 \Rightarrow \frac{y+1}{2}$$

$$\rightarrow \sqrt{u^2 + 4u - 5} \Rightarrow \frac{-b}{2a} = \frac{-4}{2} = -2 \Rightarrow \frac{y-1}{2} = -2 \Rightarrow y = -3$$

$$\log \left(\frac{u^2 + 4u + 4}{u-1} \right) \Rightarrow SR = R, D = \left(\frac{y-1}{2}, \frac{y+1}{2} \right) \Rightarrow R_y = R$$

$$\frac{1}{2} \left(\frac{y-1}{2} - \sqrt{y^2 - 4y - 4} \right) \Rightarrow \frac{y-1}{2} \Rightarrow \frac{y-1}{2} + 1 \Rightarrow \frac{y+1}{2}$$

$$y = \frac{u^2 + 4}{\sqrt{u^2 + 3}} \Rightarrow \frac{u^2 + 4}{\sqrt{u^2 + 3}} + \frac{1}{\sqrt{u^2 + 3}} \Rightarrow \sqrt{u^2 + 3} + \frac{1}{\sqrt{u^2 + 3}} \Rightarrow \min = \frac{4}{3}$$

$$\frac{u^2 + 4}{u^2 - 1} \Rightarrow \left(\frac{u^2 + 4}{u^2 - 1} \right) \Rightarrow \left(\frac{u^2 + 4}{u^2 - 1} \right) \Rightarrow \left(\frac{u^2 + 4}{u^2 - 1} \right)$$

$$y = \frac{u^2 + 4}{u^2 - 1} \Rightarrow \frac{y+4}{y-1} = u^2 \Rightarrow \sqrt{\frac{y+4}{y-1}} \Rightarrow \frac{y+4}{y-1}$$

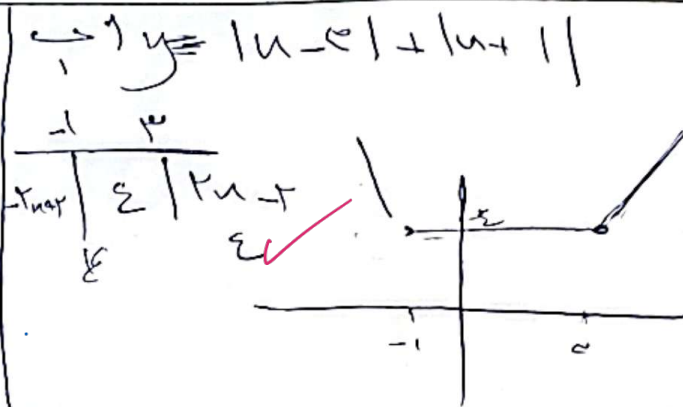
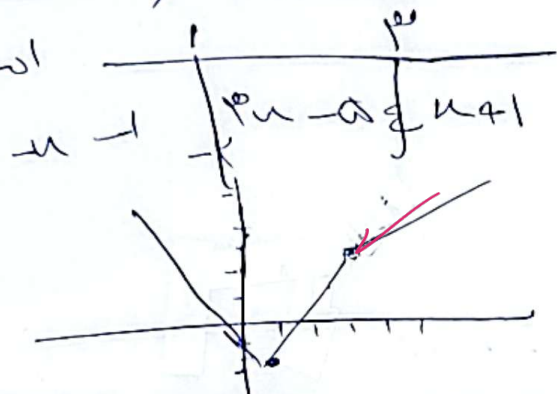
$$\frac{1 \sin u - 1}{\sin u + 1} \Rightarrow \left[-1, \frac{1}{2} \right] \Rightarrow \left[-1, \frac{1}{2} \right]$$

$$\frac{-3y-1}{y-2} \Rightarrow \frac{-3y-1}{y-2} \Rightarrow \frac{-3y-1}{y-2} \Rightarrow \frac{-3y-1}{y-2}$$

$$\frac{u^2 - u + \frac{1}{2}}{u^2 - u + 1} \Rightarrow D = R - \frac{1}{2} \Rightarrow \Delta < 0 \Rightarrow D = \frac{1}{2}$$

$$\Rightarrow \frac{u^2 - u + 1}{u^2 - u + 1} - \frac{1}{2(u^2 - u + 1)} \Rightarrow \min(u^2 - u + 1) \Rightarrow \frac{1}{2} - \frac{1}{2} + 1 = \frac{1}{2}$$

$$1 - \frac{1}{2} = \frac{1}{2} \Rightarrow [0, 1] \quad \text{نقطه}$$

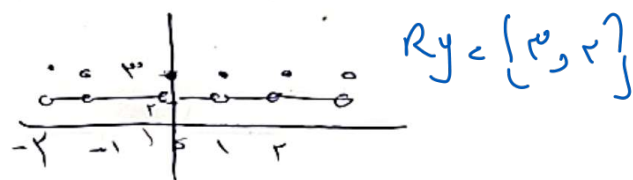


$$|u + 1| - |2u + 1| \leq 1$$

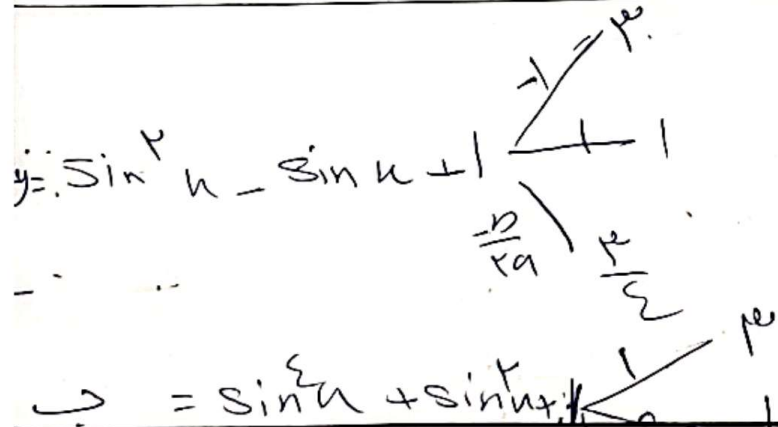
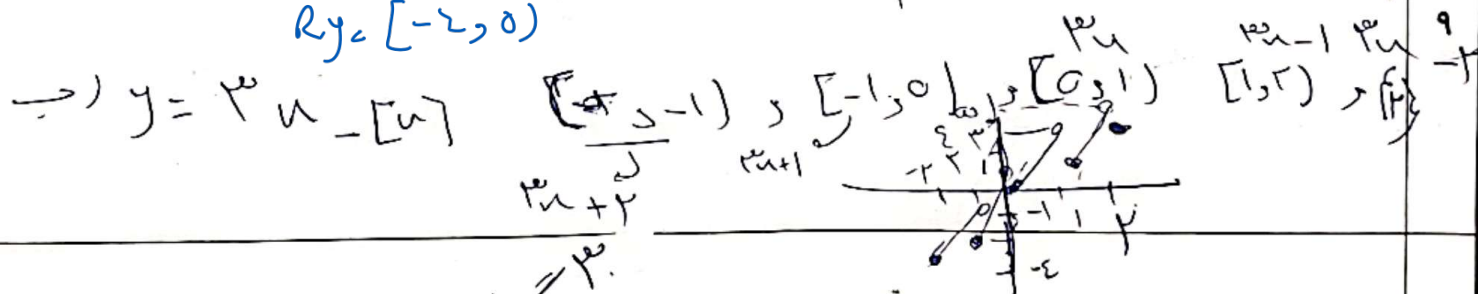
-1	1
$-u + 1 + 2u + 1$	$u + 1 - 2u - 1$
$u + 2$	$-u$
$u + 2 \leq 1$	$-u \leq 1$
$u \leq -1$	$u \geq -1$
$u \geq -2$	$u \leq 0$

$$[-2, -1] \cup [-1, 0] \cup [0, +\infty)$$

$$\Rightarrow y = [u] + 1 + [u] \Rightarrow$$



$$Ry = [-2, 0]$$



$$\Rightarrow \left[\frac{1}{2}, 1 \right]$$

$$y = \sin^2 u + \sin u + 1$$

$$\frac{dy}{du} = 2 \sin u \cos u + \cos u = \cos u (2 \sin u + 1) = 0$$

$$\cos u = 0 \Rightarrow u = \frac{\pi}{2} \Rightarrow \sin u = 1 \Rightarrow y = 1 + 1 + 1 = 3$$

$$2 \sin u + 1 = 0 \Rightarrow \sin u = -\frac{1}{2} \Rightarrow u = \frac{7\pi}{6} \Rightarrow \sin u = -\frac{1}{2} \Rightarrow y = \frac{1}{4} - \frac{1}{2} + 1 = \frac{3}{4}$$